

Gateway

Volume 5
Number 21

July 14, 1989



The ARRL Packet-Radio Newsletter

WASHINGTON FREQUENCY COORDINATOR ENDS PACKET RADIO COORDINATION

The Western Washington Amateur Relay Association (WWARA), the frequency coordinator for Western Washington, has terminated frequency coordination of packet-radio operations. At its April meeting, the membership of WWARA voted unanimously to approve a proposal that ends its packet-radio frequency coordination function (see "No Packet-Radio Coordination Proposed" in *Gateway*, Volume 5, Number 11). WWARA will retain the power to coordinate frequencies of packet-radio operations that wish to use a standard voice repeater frequency pair. After the proposal was accepted, WWARA terminated all of its previous packet-radio frequency coordinations and sent certified letters to the affected parties notifying them of the termination.

The WWARA membership also unanimously voted to recognize the Northwest Amateur Packet Radio Association (NAPRA) as the frequency coordinator of those packet-radio operations that are no longer under WWARA's jurisdiction.

from *The Coordinator* (WWARA's newsletter)

BROADCAST PROTOCOL PROPOSED FOR SATELLITES

Harold Price, NK6K, and Jeff Ward, GØ/K8KA, have presented revision 4 of a proposal for a protocol to be used by the UoSAT-D Packet Communications Experiment and by the AMSAT-NA MicroSats. This protocol is meant to facilitate the transmission of data to large numbers of ground users and would supplement the standard AX.25 connected mode.

The design of the protocol is not yet final, nor is its particular implementation on the satellites. Allowing time for comments, a final version should be available in late July.

Comments on this proposal are welcome and encouraged. Address comments to HPRICE or UOSAT via Telemail, 71635,1174 via CompuServe, NK6K @ WB6YMH or GØK8KA @ GB2UP via packet radio.

[The proposal is available for downloading from Data Library 9 (DL9) on CompuServe's HamNet.]

AMSAT SPACE SYMPOSIUM RESCHEDULED

A conflict between the scheduled dates of the MicroSat/UoSAT launch and the AMSAT-NA Space Symposium have motivated

AMSAT-NA officials to reschedule the Symposium to the weekend of November 3-5 (the MicroSat/UoSAT launch is now scheduled for November 10 and the Symposium had been originally scheduled for November 10-12). Since many key personnel for the satellite program will be delivering papers at the Symposium, it was felt that it would be impossible for them to be in two places at once. Therefore, to avoid this conflict, the Symposium was rescheduled to one week earlier.

Everything else remains the same. The location of the Symposium is Des Moines, with registration on Friday, seminars on Saturday, the Annual AMSAT-NA Banquet on Saturday evening and the Board of Directors meeting on Sunday. With the launch of the MicroSats and UoSATs D and E, there will be many papers devoted to various aspects of these new satellites. For more information, contact AMSAT-NA at 301-589-6062 or Ralph Wallio, WØRPK, at 515-961-6406.

from AMSAT

THE WØRLI INTERVIEW

Hank Oredson, WØRLI, is the author of the world-renowned WØRLI Mailbox software. In 1984, Hank wrote his mailbox software for the Xerox 820 computer, however, the limitations of that computer caused Hank to switch to the IBM PC (and its clones) where it now resides in PBBSSs throughout the packet-radio world. Herb Sallis, WB1DSW, and other members of the New England Packet Radio Association (NEPRA) spent an afternoon discussing the state of the packet-radio art with Hank while he was visiting Massachusetts. The following interview was written by Herb and published in NEPRA's newsletter, *NEPRA PacketEar*.

By the way, Hank recently released Version 10.08 of his mailbox software and it is available from the usual sources.

Q: How are things going on your side of the country in terms of the network your folks are putting together?

WØRLI: Not too well in my area actually. Northern California LAN frequencies are out of control. We have some real problems in terms of overall network speed versus the number of packet users on the air at any given time. Many of the network enhancements we looked forward to from NET/ROM haven't come into being with hidden transmitters and faulty radios among the top problems.

Q: Is anyone doing anything about the situation?

WØRLI: I suppose just as in any network, we have some political

hurdles to deal with. Mountaintops, while not scarce, are difficult to acquire because of the tremendous number of other services (ham and non-ham) in use. Like many other networks, we have the "doers" and "users." The doers are so few in number that they can't get enough done fast enough, while the users do most of the complaining.

There are moves afoot to experiment with the new 9600-baud modems available from England. Some radios and modem kits are being prepared for testing, but right now I'm not exactly sure where all that is. Getting the network to move faster has to be an absolute priority.

Q: Describe briefly the size of the network at this time.

WØRLI: In my small area, there are 24 active NET/ROM nodes and approximately six active full-time mailbox systems. I have a hard time keeping track of the numbers out there beyond the valley I live in, but it seems as though we're sprouting new systems each day.

Hank quickly looked at a New England backbone map and commented: A lot has changed since I left. This looks impressive! Does it work? I would say that New England and the East Coast have a good looking network... much better than ours given the current state of affairs.

Q: How many of your mailbox systems are in operation today?

WØRLI: Worldwide? About 2000. That's a seat-of-the-pants guess. By the way, you can expect to see the first Russian mailbox systems appearing on the air within the next few weeks.

Q: Glastnost.

WØRLI: Indeed! I know there are over 350 mailboxes running now in Japan, too.

Q: That's a sizeable number. Are the Japanese networks different? Are they better, worse, the same?

WØRLI: Far superior I feel that the Japanese are doing their network the right way and the effort they have put into organization, control and implementation is paying off handsomely.

Q: Please tell us their secrets!!

WØRLI: First, they have assigned a Network Administrator for each of their sectors. He/she is given almost total reign in terms of setting up things like individual station parameters, NET/ROM and digipeater parameters, mailbox behaviors, frequency allotments, etc. If someone doesn't play by the rules, that station is excluded from accessing mailboxes and is generally considered *persona non grata* until he/she changes his/her thinking.

Also, they have wisely allocated large chunks of frequency spectrum for packet use. They have carved out many channels on 2 meters with standard spacing. Further, they have allotted 200 channels in the 440 to 450-MHz range. Each block of 100 channels is spaced at least 100 kHz apart giving them the ultimate in flexibility later when faster speeds become widely available. The

Japanese really know how to organize. They multi-channel everything. They are also aggressively moving into the 1296-MHz range so that sites are available and in use for later upgrading.

Q: How do you come to know so much about Japan?

WØRLI: In February 1988, they had a giant organizing effort, a major conference, and I was invited to attend, all expenses paid. I gratefully attended and have kept abreast of affairs over there through JA1KSO.

Q: Very interesting. Speaking of "mailboxes," we've all seen the arrival of AA4RE's Multi-Connect BBS software recently. What can you tell us about it?

WØRLI: First off, I'm really not involved in that project as heavily as some people think. I do have a business to run and other things I like to do. From what I see, it looks and feels like a WØRLI system except that AA4RE uses the multi-connect capability of the newer TNCs.

From my perspective, we already have networks jammed with retries and crashes brought on by the nature of the AX.25 protocol. I don't think most people realize that, although their TNCs are set to 1200 baud on the RF port, the more stations you add to a channel, the worse things become in terms of congestion, and, as a result, your throughput rate is roughly divided by the number of stations that can be heard. Thus, 1200 baud is more like 50 baud on a busy channel crammed with retries and failures. Multi-connects from a BBS standpoint adds to the futility. The full weight of the system's multiple attempts to resend the same packets over and over as the approaching acknowledgements fail to satisfy the sending TNC, bring further doom upon a channel. This is why I, for one, have stayed away from doing anything of this sort. At 1200 baud, it will bring most networks to their knees!

By the way, I'm glad to hear you use the word "mailbox" instead of BBS. I have called my program a mailbox from the very beginning.

Q: What will the next version of the mailbox look like?

WØRLI: I don't have any firm plans in mind. It does exactly what I think needs to be done at this time. On the other hand, I would say that my new task would be to incorporate some specific kinds of "server" functions to do specific tasks related to specific needs. And, of course, there are always those nifty little suggestions that come from just about everywhere, not to mention "bug" fixes.

Q: Speaking of new features, the round-table function came out in Version 9.01, but was not documented and caused some problems. What was the force behind it?

WØRLI: You know I listen to folks when they ask for things and I try to give due consideration where I feel it's necessary. The request for a round-table function came from an ARES group that pleaded desperately for a way to conduct a net-type operation. So, I stuck it in and they used it once, maybe twice and went back to sending mail back and forth. I guess it wasn't as useful as they first thought! I may take it out if there's no need for it. My philosophy is that I consider memory to be at a premium, so I try to keep my code as tight, compact and short as possible.

Incidentally, let me comment on the lack of documentation. I can't do both.

The mailbox now supports passwords for remote SYSOPs. I did this at the request of some European mailbox operators who were being plagued by "packet terrorists" bent on destroying their network. I know this feature is one that I'll probably keep.

Q: I quite agree. The code is so rich at this point that I frankly don't see how one single person could keep the documentation whole. Now, where do you see the future of packet radio going? Is TCP/IP going to take over?

WØRLI: The first question is an interesting one, one which I get asked all the time. My answer is that I'm not certain. We have lots of good applications out there now just beginning to come to the fore. We need to move the network faster. We need some satellite links between major areas of the country and around the globe, more than what is available now. We need to educate users and SYSOPs alike. Twenty minutes ago, we looked at NM1D's DOSGate, a real slick tool that can be used for a variety of purposes. That's available now and I hope to see more of them spring up.

I also get many questions about TCP/IP and what its future is. My opinion is that it's nice, but it doesn't do anything more than the current systems can do. I know it is getting more play in this area now. I'm all for new things.

Q: It's been great seeing you again and getting your insights. All of us want to thank you for your tireless efforts in providing such a fine system.

WØRLI: Thanks. I'll be back some day soon, I trust, and be able to make a NEPRA meeting!

Q: We all hope you'll be back soon. 73.

(For more information about NEPRA, write to PO Box 208, East Kingston, NH 03827 or attend one of their monthly meetings on the second Thursday of each month, 7:30 PM at the Honeywell plant cafeteria in Billerica, MA.)

LAN-LINK

LAN-LINK is a packet-radio and AMTOR terminal program that runs on IBM PCs or clones and provides a window into the Local Area Network (LAN) for the AEA PK-232s, Kantronics KAMs, TNC 1s and TNC 2s. It uses menus and function keys to allow the user to communicate, rather than play with TNC parameters which he doesn't understand. Some of its features follow.

- o Recognizes your call sign in a PBBS mail beacon, then automatically connects and downloads your messages.
- o Automatically requests bulletins from the PBBS on subjects that interest you.
- o Provides a conference mode for multiconnect situations.

- o Provides split-screen operation for incoming and outgoing text, as well as for terminal status information.
- o Alerts you when a predetermined call sign shows up in a packet header on frequency.
- o Automatically captures to disk a recording of all connections. Indicates number of packet radio connections.
- o Provides "smart" packet mode printer control that turns off upon disconnection.
- o Indicates that a specified station has connected while you were away.
- o Automatically sets NET/ROM and KA-Node paths from its call/path file.
- o Stores and forwards LAN messages.
- o Automatically connects and downloads messages from other LAN-LINK stations.
- o Determines paths to DX stations.
- o Provides AMTOR/packet-radio MSO and Selective Automatic Answering Machine function that displays a message queue.
- o Automatically configures TNC for HF and VHF packet-radio operation.
- o Calls CQ repetitively and alerts you when a reply is received.
- o Provides RTTY SELCAL mode.
- o Supports RTTY Navy MARS File Transfer Protocols (PK-232 only).
- o Contest mode sends standard message and automatically increments QSO count.
- o Provides single keystroke set-up to receive UoSAT-OSCAR 9 and Phase III RTTY telemetry (PK-232 only).

LAN-LINK is distributed as shareware, ie, the user can try the program and, if he wishes to keep it, he registers his copy by sending \$35 to its author. Registration entitles the owner to upgrades and full support. Users of earlier versions of LAN-LINK and of PK3223COM Version 1.48 may upgrade by sending the author a blank, formatted diskette and SASE.

LAN-LINK is written, maintained and upgraded by Joe Kasser, G3ZCZ, POB 3419, Silver Spring, MD 20901, telephone 301-593-6236.

from Joe Kasser, G3ZCZ

GATEWAY CONTRIBUTIONS

Submissions for publication in *Gateway* are welcome. You may submit material via the US mail to:

Gateway
Stan Horzepa, WA1LOU
75 Kreger Drive
Wolcott, CT 06716-2702

or electronically, via CompuServe to user ID 70645,247. Via telephone, your editor can be reached on evenings and weekends at 203-879-1348 and he can switch a modem on line to receive text at 300, 1200 or 2400 bit/s. (Personal messages may be sent to your *Gateway* editor via packet radio to: WA1LOU @ W1AW.)

The deadline for each issue of *Gateway* is the Saturday preceding the issue date (which is typically a Friday).

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Gateway: The ARRL Packet Radio Newsletter is published by the:

American Radio Relay League
225 Main Street, Newington, CT 06111

Stan Horzepa, WA1LOU
Editor

Larry E. Price, W4RA
President

David Sumner, K1ZZ
Executive Vice President

Sal Prado
Gateway Circulation

Subscriptions are available to ARRL members and nonmembers, at the following rates:

For 25 issues of *Gateway*:

In the US

ARRL Member \$6.00

Nonmember \$9.00

In the US, Canada and Mexico by First Class mail

ARRL Member \$11.00

Nonmember \$14.00

Elsewhere by Airmail

ARRL Member \$14.00

Nonmember \$17.00

Prices are subject to change without notice. Remittance must be in US funds, and checks must be drawn on a bank in the US.

Gateway: The ARRL
Packet Radio Newsletter
American Radio Relay League
225 Main Street
Newington, CT 06111

Nonprofit Organization
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